

ABSTRACT

The substrate for biomolecule microarray has one or more spots for immobilizing a biomolecule. The spot for immobilizing a biomolecule protrudes from the surface of the substrate and has a flat surface for spotting on the top thereof, at least the surface of the substrate around the protruding spot part, the lateral surface of the protruding spot part and the flat surface for spotting are comprised of an electrically conductive substance. Alternatively, the spot for immobilizing a biomolecule protrudes from the surface of the substrate and has a flat surface for spotting on the top thereof, the protruding spot parts adjacent each other border through the lateral surface of the protruding spot part, and at least the lateral surface of the protruding spot part and the flat surface for spotting are comprised of an electrically conductive substance. The biomolecule microarray comprises the above substrate and a biomolecule and the biomolecule is immobilized on at least the flat surface for spotting on the substrate. The device of promoting interaction between biomolecules comprises a biomolecule microarray having one or more biomolecule-immobilized spots on a substrate, an electrode provided so as to face the surface having the biomolecule-immobilized spots of the microarray, and a power source for applying an electric field between the microarray and the electrode. The method of promoting interaction between biomolecules employing the above device. The method of detecting interaction between biomolecules. Provided are a substrate having biomolecule immobilization regions of prescribed shape on a biomolecule microarray, and means by which the interaction of biomolecules is rapidly conducted, the interaction of trace quantities of sample is promoted, and the interaction is detected and analyzed rapidly and with high sensitivity.